ORAL ARGUMENT NOT YET SCHEDULED

*In the*

UNITED STATES COURT OF APPEALS

*for the*

DISTRICT OF COLUMBIA CIRCUIT

***No. 09-1237***

CHAMBER OF COMMERCE OF THE UNITED STATES OF AMERICA, ET AL.,

Petitioners,

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, ET AL.,

Respondents.

**On Petition For Review of Final Action of the United States Environmental Protection Agency**

# FINAL JOINT BRIEF FOR *AMICI CURIAE* PG&E CORPORATION AND SEMPRA ENERGY IN SUPPORT OF RESPONDENTS

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# CERTIFICATE AS TO PARTIES RULINGS AND RELATED CASES

## A. Parties and Amici

All of the parties, intervenors, and *amici curiae* appearing before this Court are listed in Respondents' Opening Brief.

## B. Rulings under Review

A statement of the rulings under review appears in Respondents' Opening Brief.

## C. Related Cases

A statement of related cases appears in Respondents' Opening Brief.

November 12, 2010

Respectfully submitted,

FOR *AMICI CURIAE* PG&E CORPORATION AND SEMPRA ENERGY

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**RULE 26.1 DISCLOSURE STATEMENT**
**FOR PG&E CORPORATION AND SEMPRA ENERGY**

Pursuant to FRAP Rule 26.1 and Circuit Rule 26.1, PG&E Corporation (PG&E) and Sempra Energy submit the following disclosure statement.

1. PG&E is an energy-based holding company headquartered in San Francisco. It has no parent corporation. No publicly held corporation owns of record or is known to PG&E to own beneficially ten percent or more of its outstanding voting securities.

2. Sempra Energy is an energy-based holding company headquartered in San Diego. It has no parent corporation. No publicly held corporation owns of record or is known to Sempra Energy to own beneficially ten percent or more of its outstanding voting securities.

November 12, 2010

Respectfully submitted,

FOR PG&E CORPORATION

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[1] Each authority upon which we chiefly rely is marked with an asterisk.

## GLOSSARY OF ACRONYMS AND ABBREVIATIONS

The following is a glossary of acronyms and abbreviations used in this brief:

AB 32 – California Global Warming Solutions Act of 2006

CAA – Clean Air Act

CARB – California Air Resources Board

CHP – Combined-heat-and-power

CPUC – California Public Utilities Commission

EPA – United States Environmental Protection Agency

GHG – Greenhouse gases

GWP – Global warming potential

$MMTCO_2E$ – Million metric tons of carbon dioxide equivalent

# I. INTRODUCTION

PG&E Corporation ("PG&E") and Sempra Energy ("Sempra") submit this brief as *amici curiae* pursuant to this Court's Order of June 8, 2010, and in support of Respondents.

Petitioners challenge EPA's grant under section 209(b) of the Clean Air Act ("CAA"), 42 U.S.C. §7543(b), of a preemption waiver for certain California standards governing emissions of greenhouse gases ("GHGs") from light-duty motor vehicles.[2] Petitioners ask this Court to vacate the EPA's decision and remand it to EPA for proper disposition. *See*, *e.g.*, Petitioners' Opening Brief, at 18 and 62.

PG&E and Sempra hereby supplement Respondents' Brief by describing the practical impact vacating EPA's decision would have on them in the context of the California Global Warming Solutions Act of 2006 (commonly known as "AB 32"),[3] California's trailblazing program to reduce its statewide annual GHG emissions to 1990 levels by 2020. Vacating EPA's grant of a preemption waiver would increase the risk that the electricity sector, including PG&E, Sempra

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[2] EPA's notice of its approval of California's waiver request was published in the *Federal Register* on July 8, 2009 (74 Fed. Reg. 32,744).

[3] Codified at California Health and Safety Code ("HSC"), §§38500 *et seq*. (attached as Exhibit A).

and their customers, would have to shoulder more than their fair share of the cost of reducing GHG emissions under AB 32.

## II. BACKGROUND

### A. PG&E

PG&E is an energy-based holding company headquartered in San Francisco. It is the parent corporation of Pacific Gas and Electric Company (the "Company") which supplies natural gas and electricity services to 15 million people throughout a 70,000-square-mile service area in northern and central California. The Company's rates for such services are regulated, in part by the California Public Utilities Commission ("CPUC").

PG&E is committed to being an industry leader in addressing GHG emissions. It was among the first companies in California to support enactment of AB 32. It is a founding member of the U.S. Climate Action Partnership (http://www.us-cap.org/about/index.asp). PG&E's customers have invested in a clean electric generating portfolio which makes its GHG emissions among the lowest of any utility in the nation. Over 50 percent of the electricity PG&E delivers comes from sources that emit no GHGs.

### B. Sempra

Sempra is an energy-based holding company headquartered in San Diego. It is the parent corporation of San Diego Gas and Electric Company and Southern California Gas Company (collectively, "Sempra"). Sempra supplies natural gas and/or electricity to 23 million people throughout a combined 24,000-square-mile service area in southern and central California. Its rates for such services are regulated in part by the CPUC.

Sempra also is committed to being an industry leader on GHG emissions. It has converted over 1,200 of its fleet vehicles to natural gas fuel, helped other fleets make similar conversions, and provided natural gas vehicle fueling infrastructure, including 16 public refueling stations. It actively supports development and use of zero-emission electric vehicles, hybrid electric vehicles, and electric transit buses and rail.

### C. Interest of PG&E and Sempra

While taking a leadership role in reducing GHG emissions, PG&E and Sempra also have a vital interest in ensuring that all sectors of the California economy, including the transportation sector, contribute their fair share toward achieving the necessary GHG emission reductions, in part because AB 32 states that it does not alter "the obligation of an electrical corporation to provide customers with safe and reliable electric service." HSC §38593(b).

PG&E supported the 2002 California legislation (AB 1493) that directed CARB to adopt the motor vehicle GHG emission standards at issue in this litigation. PG&E reaffirmed its interest in the EPA's decision on federal preemption in its written comments to the agency of April 23, 2009:

> According to the California Air Resources Board (CARB) the transportation sector is responsible for approximately 41 percent of California's GHG emissions. Motor vehicle GHG emissions must be reduced or policymakers will be forced to seek reductions from consumers and businesses in other sectors of California's economy to make up the difference. As a result, those consumers and business may be unduly burdened by the need to reduce GHG emissions by more than their fair share. Approval of the waiver not only makes good sense from a public policy perspective, it is essential to ensure fair implementation of AB 32 and SB 375. Accordingly, PG&E supports California's request for a preemption waiver that will allow California to promptly implement its motor vehicle GHG emission standards.

April 23, 2009 letter from John Busterud, Pacific Gas and Electric Company, to the U.S. Environmental Protection Agency (attached as Exhibit B).[4]

Sempra has similarly expressed its interest in EPA's decision on federal preemption. For example, a Sempra representative testified during hearings held by EPA in 2007 on CARB's waiver request: "Since mobile sources account for almost 41 percent of statewide greenhouse gas emissions it is vital for the state to be able to look at the transportation sector for a fair share of emission reductions in order to help the state achieve its goals." Transcript, Public Hearing, at 82 (May 30, 2007)(EPA-HQ-OAR-2006-0173-0421).

### D. AB 32 and CARB's Scoping Plan

AB 32 (HSC Sections 38500 et seq.) was premised on the California Legislature's finding that "[g]lobal warming poses a serious threat to the economic well-being, public health, natural resources and the environment of California." HSC Section 38501(a). The landmark legislation, enacted in 2006, recognizes that "[n]ational and international actions are necessary to fully address the issue of global warming. However, action taken by California to reduce

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[4] PG&E also submitted comments in June 2007 in support of California's initial waiver request, and testified in support at EPA public hearings in May 2007.

emissions of greenhouse gases will have far-reaching effects by encouraging other states, the federal government, and other countries to act." HSC Section 38501(d). The California Air Resources Board ("CARB") was charged with determining, by January 2008, the level of statewide GHG emissions that existed in 1990 and approving a statewide GHG emissions cap, equivalent to the 1990 emissions level, to be achieved by 2020. HSC Section 38550. The cap includes GHG emissions from generation of all electricity delivered to and consumed in California. HSC Section 38505(m).

CARB was also required to prepare and approve a "Scoping Plan" describing how it intends to meet the 2020 goal. HSC Section 38561. Pursuant to AB 32 the Scoping Plan was due on or before January 2009, and CARB approved the final Scoping Plan ("Plan") in December 2008.[5] The Plan calls for major reductions in GHG emissions in California, as measured in terms of millions of metric tons of carbon dioxide equivalent ("$MMTCO_2E$"). The Plan pegs the 1990 GHG emissions level at 427 $MMTCO_2E$ and the 2020 "business as usual" level at 596 $MMTCO_2E$, if pre-Plan trends were to continue

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[5] *See* http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf. Relevant sections of the Plan are attached as Exhibit C.

unabated. According to the Plan the [2004] level is 469 $MMTCO_2E$. In order to bring the projected 2020 emission level back down to the 1990 level, a reduction of 169 $MMTCO_2E$ from "business as usual" 2020 levels is required. This means that California will reduce GHG emissions by 30 percent from the projected 2020 level in less than a decade, a challenging task.[6]

## III. SUMMARY OF ARGUMENT

CARB is counting on its standards for GHG emissions from motor vehicles as a critical part of its scoping plan to meet the goals of AB 32. Vacating EPA's waiver determination would force CARB to re-tool its plan and such re-tooling probably would result in efforts to extract from PG&E, Sempra and the rest of the electricity sector more than their fair share of the GHG emission reductions required by AB 32. PG&E and Sempra each have had a long history of successful and proactive leadership in reducing their respective carbon footprints. PG&E and Sempra urge the Court to deny the petition.

## IV. ARGUMENT

AB 32 directs CARB to adopt measures to achieve "the maximum technologically feasible and cost effective reductions" in

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[6] *See id.*, at ES-1.

GHG emissions, "in furtherance of achieving the statewide [GHG] emissions limit." See HSC Sections 38561(a) and 38562(a). CARB, moreover, must design the measures "in a manner that is equitable, seeks to minimize costs and maximize the total benefits to California, and encourages early action to reduce greenhouse gas emissions." HSC Section 38562(b)(1).

### A. California's Plan for Reducing GHG Emissions to 1990 Levels Requires Participation by All Sectors, Including the Transportation Section, the Largest Contributor of GHG emissions.

According to the Plan, the transportation sector is the largest contributor to GHG emissions and the electricity and commercial/residential energy sector is the next largest. The Plan summarizes these impacts as follows:

> [T]he Transportation sector – largely the cars and trucks that move goods and people – is the largest contributor with 38 percent of the state's total greenhouse gas emissions. … [If California takes] no action, greenhouse gas emissions in the Transportation sector are expected to grow by approximately 25 percent by 2020 (an increase of 46 MMTCO2E).
>
> The Electricity and Commercial/Residential Energy sector is the next largest contributor with over 30 percent of the statewide greenhouse gas emissions. Although electricity imported into California accounts for only about a quarter of our electricity, imports contribute more than half of the greenhouse gas emissions from electricity because

> much of the imported electricity is generated at coal-fired power plants. AB 32 specifically requires ARB to address emissions from electricity sources both inside and outside of the state.

Plan at 11-12.

Given these impacts, it is not surprising that the Plan seeks to obtain most of the necessary reductions (approximately 113 of the 169 $MMTCO_2E$) from these two sectors. From the transportation sector, the Plan seeks the following reductions:

| | |
|---|---|
| Light-duty vehicles | 31.7 $MMTCO_2E$ |
| Low carbon transportation fuel standards | 15.0 |
| Miscellaneous transportation measures[7] | 19.3 |
| TOTAL | 66.0 $MMTCO_2E$ |

From the electricity sector, the Plan seeks the following reductions:

| | |
|---|---|
| Energy efficiency | 26.3 $MMTCO_2E$ |
| Renewable resources | 21.3 |
| TOTAL | 47.6 $MMTCO_2E$ |

The transportation and electricity sectors are the primary targets of the Plan, with more than 20% of the necessary reductions coming from the vehicle emission standards alone.

[7] This category includes: regional transportation, vehicle efficiency measures, goods movement, medium/heavy duty vehicles and high speed rail.

### B. Vacating the Waiver Increases the Risks Of Inequitable Treatment for the Electricity and Other Sectors As A Result of Any Shortfalls in the Transportation Sector.

California law enacted prior to AB 32 directs CARB to adopt standards that will "achieve the maximum feasible and cost-effective reduction of greenhouse gas emissions from motor vehicles." HSC Section 43018.5. The standards adopted by CARB to meet this directive are the standards for which the preemption waiver at issue in this case was granted by EPA. When it later enacted AB 32, the California Legislature recognized the importance of those motor vehicle GHG emission reductions to achieving the state's GHG goals under AB 32. Indeed, in AB 32 the Legislature specified that if the state motor vehicle GHG emission standards "do not remain in effect" for any reason (which would include federal preemption under the Clean Air Act), CARB "shall implement alternative regulations" in order to achieve "equivalent or greater" GHG emission reductions from mobile sources. HSC Section 38590. Since the preempted standards originally were designed to achieve "the maximum feasible and cost-effective [GHG emission] reduction," it seems unlikely, at best, that CARB would be able to implement alternative regulations that (i) would achieve "equivalent or greater" emissions reductions in time to meet AB 32's 2020 deadline for achieving 1990 levels of GHG emissions, and (ii) would not also be preempted under the Clean Air Act.

As described above, the Scoping Plan contemplates achieving a GHG emission reduction of 31.7 $MMTCO_2E$ from light duty motor vehicles. If some or all of this reduction cannot be achieved due to federal preemption, and cannot be replaced by alternative emission reductions from mobile sources, CARB will have no choice but to achieve the needed reductions from one or more other sectors if it is to meet the AB 32 emission reduction mandate. Since the electricity sector is the second largest contributor of GHG emissions in California, it would likely be selected as the source of most or all of those make-up reductions, which could impose an undue cost on our customers. However, the Plan already includes "the maximum technologically feasible and cost effective reductions" that can be obtained from the electricity and other stationary source sectors, and was already designed to be "equitable" and to "minimize costs and maximize the total benefits to California". Consequently, further reductions from the electricity sector, if they could be identified and achieved, would no longer be "cost effective," and would be inconsistent with the equitable balance struck by CARB in developing and adopting the Plan. CARB also recognized the difficulty it would face if the expected motor vehicle GHG emission reductions do not materialize, stating in the Scoping Plan that "[if] the transportation sector does not provide significant GHG reductions, it would be difficult for another sector to make up the emission reductions." Plan, at C-56. It would be inequitable to PG&E, Sempra and their customers to attempt to achieve GHG reductions from the electricity sector that go beyond the cost effective, feasible, and equitable level already identified in the Scoping Plan in a "difficult" effort to make up a GHG emission reduction shortfall from motor vehicles.

## V. CONCLUSION

CARB is counting on the vehicle emissions standards as a critical part of its plan to meet AB 32 goals. Vacating the EPA's waiver determination would force CARB to re-tool its plan and such re-tooling could result in efforts to extract greater concessions from the electricity sector, including PG&E and Sempra, each of whom have had a long history of successful and proactive leadership in reducing their respective carbon footprints. PG&E and Sempra urge the Court to deny the petition.

November 12, 2010

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# EXHIBIT A

**Assembly Bill No. 32**

CHAPTER 488

An act to add Division 25.5 (commencing with Section 38500) to the Health and Safety Code, relating to air pollution.

[Approved by Governor September 27, 2006. Filed with Secretary of State September 27, 2006.]

LEGISLATIVE COUNSEL'S DIGEST

AB 32, Nunez. Air pollution: greenhouse gases: California Global Warming Solutions Act of 2006.

Under existing law, the State Air Resources Board (state board), the State Energy Resources Conservation and Development Commission (Energy Commission), and the California Climate Action Registry all have responsibilities with respect to the control of emissions of greenhouse gases, as defined, and the Secretary for Environmental Protection is required to coordinate emission reductions of greenhouse gases and climate change activity in state government.

This bill would require the state board to adopt regulations to require the reporting and verification of statewide greenhouse gas emissions and to monitor and enforce compliance with this program, as specified. The bill would require the state board to adopt a statewide greenhouse gas emissions limit equivalent to the statewide greenhouse gas emissions levels in 1990 to be achieved by 2020, as specified. The bill would require the state board to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective greenhouse gas emission reductions, as specified. The bill would authorize the state board to adopt market-based compliance mechanisms, as defined, meeting specified requirements. The bill would require the state board to monitor compliance with and enforce any rule, regulation, order, emission limitation, emissions reduction measure, or market-based compliance mechanism adopted by the state board, pursuant to specified provisions of existing law. The bill would authorize the state board to adopt a schedule of fees to be paid by regulated sources of greenhouse gas emissions, as specified.

Because the bill would require the state board to establish emissions limits and other requirements, the violation of which would be a crime, this bill would create a state-mandated local program.

The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that no reimbursement is required by this act for a specified reason.

*The people of the State of California do enact as follows:*

SECTION 1. Division 25.5 (commencing with Section 38500) is added to the Health and Safety Code, to read:

# DIVISION 25.5. CALIFORNIA GLOBAL WARMING SOLUTIONS ACT OF 2006

## PART 1. GENERAL PROVISIONS

### Chapter 1. Title of Division

38500. This division shall be known, and may be cited, as the California Global Warming Solutions Act of 2006.

### Chapter 2. Findings and Declarations

38501. The Legislature finds and declares all of the following:

(a) Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

(b) Global warming will have detrimental effects on some of California's largest industries, including agriculture, wine, tourism, skiing, recreational and commercial fishing, and forestry. It will also increase the strain on electricity supplies necessary to meet the demand for summer air-conditioning in the hottest parts of the state.

(c) California has long been a national and international leader on energy conservation and environmental stewardship efforts, including the areas of air quality protections, energy efficiency requirements, renewable energy standards, natural resource conservation, and greenhouse gas emission standards for passenger vehicles. The program established by this division will continue this tradition of environmental leadership by placing California at the forefront of national and international efforts to reduce emissions of greenhouse gases.

(d) National and international actions are necessary to fully address the issue of global warming. However, action taken by California to reduce emissions of greenhouse gases will have far-reaching effects by encouraging other states, the federal government, and other countries to act.

(e) By exercising a global leadership role, California will also position its economy, technology centers, financial institutions, and businesses to benefit from national and international efforts to reduce emissions of greenhouse gases. More importantly, investing in the development of innovative and pioneering technologies will assist California in achieving the 2020 statewide limit on emissions of greenhouse gases established by this division and will provide an opportunity for the state to take a global economic and technological leadership role in reducing emissions of greenhouse gases.

(f) It is the intent of the Legislature that the State Air Resources Board coordinate with state agencies, as well as consult with the environmental justice community, industry sectors, business groups, academic institutions, environmental organizations, and other stakeholders in implementing this division.

(g) It is the intent of the Legislature that the State Air Resources Board consult with the Public Utilities Commission in the development of emissions reduction measures, including limits on emissions of greenhouse gases applied to electricity and natural gas providers regulated by the Public Utilities Commission in order to ensure that electricity and natural gas providers are not required to meet duplicative or inconsistent regulatory requirements.

(h) It is the intent of the Legislature that the State Air Resources Board design emissions reduction measures to meet the statewide emissions limits for greenhouse gases established pursuant to this division in a manner that minimizes costs and maximizes benefits for California's economy, improves and modernizes California's energy infrastructure and maintains electric system reliability, maximizes additional environmental and economic co-benefits for California, and complements the state's efforts to improve air quality.

(i) It is the intent of the Legislature that the Climate Action Team established by the Governor to coordinate the efforts set forth under Executive Order S-3-05 continue its role in coordinating overall climate policy.

## Chapter 3. Definitions

38505. For the purposes of this division, the following terms have the following meanings:

(a) "Allowance" means an authorization to emit, during a specified year, up to one ton of carbon dioxide equivalent.

(b) "Alternative compliance mechanism" means an action undertaken by a greenhouse gas emission source that achieves the equivalent reduction of greenhouse gas emissions over the same time period as a direct emission reduction, and that is approved by the state board. "Alternative compliance mechanism" includes, but is not limited to, a flexible compliance schedule, alternative control technology, a process change, or a product substitution.

(c) "Carbon dioxide equivalent" means the amount of carbon dioxide by weight that would produce the same global warming impact as a given weight of another greenhouse gas, based on the best available science, including from the Intergovernmental Panel on Climate Change.

(d) "Cost-effective" or "cost-effectiveness" means the cost per unit of reduced emissions of greenhouse gases adjusted for its global warming potential.

(e) "Direct emission reduction" means a greenhouse gas emission reduction action made by a greenhouse gas emission source at that source.

(f) "Emissions reduction measure" means programs, measures, standards, and alternative compliance mechanisms authorized pursuant to this division, applicable to sources or categories of sources, that are designed to reduce emissions of greenhouse gases.

(g) "Greenhouse gas" or "greenhouse gases" includes all of the following gases: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexaflouride.

(h) "Greenhouse gas emissions limit" means an authorization, during a specified year, to emit up to a level of greenhouse gases specified by the state board, expressed in tons of carbon dioxide equivalents.

(i) "Greenhouse gas emission source" or "source" means any source, or category of sources, of greenhouse gas emissions whose emissions are at a level of significance, as determined by the state board, that its participation in the program established under this division will enable the state board to effectively reduce greenhouse gas emissions and monitor compliance with the statewide greenhouse gas emissions limit.

(j) "Leakage" means a reduction in emissions of greenhouse gases within the state that is offset by an increase in emissions of greenhouse gases outside the state.

(k) "Market-based compliance mechanism" means either of the following:

(1) A system of market-based declining annual aggregate emissions limitations for sources or categories of sources that emit greenhouse gases.

(2) Greenhouse gas emissions exchanges, banking, credits, and other transactions, governed by rules and protocols established by the state board, that result in the same greenhouse gas emission reduction, over the same time period, as direct compliance with a greenhouse gas emission limit or emission reduction measure adopted by the state board pursuant to this division.

(*l*) "State board" means the State Air Resources Board.

(m) "Statewide greenhouse gas emissions" means the total annual emissions of greenhouse gases in the state, including all emissions of greenhouse gases from the generation of electricity delivered to and consumed in California, accounting for transmission and distribution line losses, whether the electricity is generated in state or imported. Statewide emissions shall be expressed in tons of carbon dioxide equivalents.

(n) "Statewide greenhouse gas emissions limit" or "statewide emissions limit" means the maximum allowable level of statewide greenhouse gas emissions in 2020, as determined by the state board pursuant to Part 3 (commencing with Section 38850).

### Chapter 4. Role of State Board

38510. The State Air Resources Board is the state agency charged with monitoring and regulating sources of emissions of greenhouse gases that cause global warming in order to reduce emissions of greenhouse gases.

## PART 2. MANDATORY GREENHOUSE GAS EMISSIONS REPORTING

38530. (a) On or before January 1, 2008, the state board shall adopt regulations to require the reporting and verification of statewide greenhouse gas emissions and to monitor and enforce compliance with this program.

(b) The regulations shall do all of the following:

(1) Require the monitoring and annual reporting of greenhouse gas emissions from greenhouse gas emission sources beginning with the sources or categories of sources that contribute the most to statewide emissions.

(2) Account for greenhouse gas emissions from all electricity consumed in the state, including transmission and distribution line losses from electricity generated within the state or imported from outside the state. This requirement applies to all retail sellers of electricity, including load-serving entities as defined in subdivision (j) of Section 380 of the Public Utilities Code and local publicly owned electric utilities as defined in Section 9604 of the Public Utilities Code.

(3) Where appropriate and to the maximum extent feasible, incorporate the standards and protocols developed by the California Climate Action Registry, established pursuant to Chapter 6 (commencing with Section 42800) of Part 4 of Division 26. Entities that voluntarily participated in the California Climate Action Registry prior to December 31, 2006, and have developed a greenhouse gas emission reporting program, shall not be required to significantly alter their reporting or verification program except as necessary to ensure that reporting is complete and verifiable for the purposes of compliance with this division as determined by the state board.

(4) Ensure rigorous and consistent accounting of emissions, and provide reporting tools and formats to ensure collection of necessary data.

(5) Ensure that greenhouse gas emission sources maintain comprehensive records of all reported greenhouse gas emissions.

(c) The state board shall do both of the following:

(1) Periodically review and update its emission reporting requirements, as necessary.

(2) Review existing and proposed international, federal, and state greenhouse gas emission reporting programs and make reasonable efforts to promote consistency among the programs established pursuant to this part and other programs, and to streamline reporting requirements on greenhouse gas emission sources.

PART 3. STATEWIDE GREENHOUSE GAS EMISSIONS LIMIT

38550. By January 1, 2008, the state board shall, after one or more public workshops, with public notice, and an opportunity for all interested parties to comment, determine what the statewide greenhouse gas emissions level was in 1990, and approve in a public hearing, a statewide greenhouse gas emissions limit that is equivalent to that level, to be achieved by 2020. In order to ensure the most accurate determination feasible, the state board shall evaluate the best available scientific, technological, and economic information on greenhouse gas emissions to determine the 1990 level of greenhouse gas emissions.

38551. (a) The statewide greenhouse gas emissions limit shall remain in effect unless otherwise amended or repealed.

(b) It is the intent of the Legislature that the statewide greenhouse gas emissions limit continue in existence and be used to maintain and continue reductions in emissions of greenhouse gases beyond 2020.

(c) The state board shall make recommendations to the Governor and the Legislature on how to continue reductions of greenhouse gas emissions beyond 2020.

PART 4. GREENHOUSE GAS EMISSIONS REDUCTIONS

38560. The state board shall adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective greenhouse gas emission reductions from sources or categories of sources, subject to the criteria and schedules set forth in this part.

38560.5. (a) On or before June 30, 2007, the state board shall publish and make available to the public a list of discrete early action greenhouse gas emission reduction measures that can be implemented prior to the measures and limits adopted pursuant to Section 38562.

(b) On or before January 1, 2010, the state board shall adopt regulations to implement the measures identified on the list published pursuant to subdivision (a).

(c) The regulations adopted by the state board pursuant to this section shall achieve the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions from those sources or categories of sources, in furtherance of achieving the statewide greenhouse gas emissions limit.

(d) The regulations adopted pursuant to this section shall be enforceable no later than January 1, 2010.

38561. (a) On or before January 1, 2009, the state board shall prepare and approve a scoping plan, as that term is understood by the state board, for achieving the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions from sources or categories of sources of greenhouse gases by 2020 under this division. The state board shall consult with all state agencies with jurisdiction over sources of greenhouse gases, including the Public Utilities Commission and the State Energy Resources Conservation and Development Commission, on all elements of its plan that pertain to energy related matters including, but not limited to, electrical generation, load based-standards or requirements, the provision of reliable and affordable electrical service, petroleum refining, and statewide fuel supplies to ensure the greenhouse gas emissions reduction activities to be adopted and implemented by the state board are complementary, nonduplicative, and can be implemented in an efficient and cost-effective manner.

(b) The plan shall identify and make recommendations on direct emission reduction measures, alternative compliance mechanisms, market-based compliance mechanisms, and potential monetary and nonmonetary incentives for sources and categories of sources that the state board finds are necessary or desirable to facilitate the achievement of the maximum feasible and cost-effective reductions of greenhouse gas emissions by 2020.

(c) In making the determinations required by subdivision (b), the state board shall consider all relevant information pertaining to greenhouse gas emissions reduction programs in other states, localities, and nations, including the northeastern states of the United States, Canada, and the European Union.

(d) The state board shall evaluate the total potential costs and total potential economic and noneconomic benefits of the plan for reducing greenhouse gases to California's economy, environment, and public health, using the best available economic models, emission estimation techniques, and other scientific methods.

(e) In developing its plan, the state board shall take into account the relative contribution of each source or source category to statewide greenhouse gas emissions, and the potential for adverse effects on small businesses, and shall recommend a de minimis threshold of greenhouse gas emissions below which emission reduction requirements will not apply.

(f) In developing its plan, the state board shall identify opportunities for emission reductions measures from all verifiable and enforceable voluntary actions, including, but not limited to, carbon sequestration projects and best management practices.

(g) The state board shall conduct a series of public workshops to give interested parties an opportunity to comment on the plan. The state board shall conduct a portion of these workshops in regions of the state that have the most significant exposure to air pollutants, including, but not limited to, communities with minority populations, communities with low-income populations, or both.

(h) The state board shall update its plan for achieving the maximum technologically feasible and cost-effective reductions of greenhouse gas emissions at least once every five years.

38562. (a) On or before January 1, 2011, the state board shall adopt greenhouse gas emission limits and emission reduction measures by regulation to achieve the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions in furtherance of achieving the statewide greenhouse gas emissions limit, to become operative beginning on January 1, 2012.

(b) In adopting regulations pursuant to this section and Part 5 (commencing with Section 38570), to the extent feasible and in furtherance of achieving the statewide greenhouse gas emissions limit, the state board shall do all of the following:

(1) Design the regulations, including distribution of emissions allowances where appropriate, in a manner that is equitable, seeks to minimize costs and maximize the total benefits to California, and encourages early action to reduce greenhouse gas emissions.

(2) Ensure that activities undertaken to comply with the regulations do not disproportionately impact low-income communities.

(3) Ensure that entities that have voluntarily reduced their greenhouse gas emissions prior to the implementation of this section receive appropriate credit for early voluntary reductions.

(4) Ensure that activities undertaken pursuant to the regulations complement, and do not interfere with, efforts to achieve and maintain federal and state ambient air quality standards and to reduce toxic air contaminant emissions.

(5) Consider cost-effectiveness of these regulations.

(6) Consider overall societal benefits, including reductions in other air pollutants, diversification of energy sources, and other benefits to the economy, environment, and public health.

(7) Minimize the administrative burden of implementing and complying with these regulations.

(8) Minimize leakage.

(9) Consider the significance of the contribution of each source or category of sources to statewide emissions of greenhouse gases.

(c) In furtherance of achieving the statewide greenhouse gas emissions limit, by January 1, 2011, the state board may adopt a regulation that establishes a system of market-based declining annual aggregate emission limits for sources or categories of sources that emit greenhouse gas emissions, applicable from January 1, 2012, to December 31, 2020, inclusive, that the state board determines will achieve the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions, in the aggregate, from those sources or categories of sources.

(d) Any regulation adopted by the state board pursuant to this part or Part 5 (commencing with Section 38570) shall ensure all of the following:

(1) The greenhouse gas emission reductions achieved are real, permanent, quantifiable, verifiable, and enforceable by the state board.

(2) For regulations pursuant to Part 5 (commencing with Section 38570), the reduction is in addition to any greenhouse gas emission reduction otherwise required by law or regulation, and any other greenhouse gas emission reduction that otherwise would occur.

(3) If applicable, the greenhouse gas emission reduction occurs over the same time period and is equivalent in amount to any direct emission reduction required pursuant to this division.

(e) The state board shall rely upon the best available economic and scientific information and its assessment of existing and projected technological capabilities when adopting the regulations required by this section.

(f) The state board shall consult with the Public Utilities Commission in the development of the regulations as they affect electricity and natural gas providers in order to minimize duplicative or inconsistent regulatory requirements.

(g) After January 1, 2011, the state board may revise regulations adopted pursuant to this section and adopt additional regulations to further the provisions of this division.

38563. Nothing in this division restricts the state board from adopting greenhouse gas emission limits or emission reduction measures prior to January 1, 2011, imposing those limits or measures prior to January 1, 2012, or providing early reduction credit where appropriate.

38564. The state board shall consult with other states, and the federal government, and other nations to identify the most effective strategies and methods to reduce greenhouse gases, manage greenhouse gas control programs, and to facilitate the development of integrated and cost-effective regional, national, and international greenhouse gas reduction programs.

38565. The state board shall ensure that the greenhouse gas emission reduction rules, regulations, programs, mechanisms, and incentives under its jurisdiction, where applicable and to the extent feasible, direct public and private investment toward the most disadvantaged communities in California and provide an opportunity for small businesses, schools, affordable housing associations, and other community institutions to participate in and benefit from statewide efforts to reduce greenhouse gas emissions.

PART 5. MARKET-BASED COMPLIANCE MECHANISMS

38570. (a) The state board may include in the regulations adopted pursuant to Section 38562 the use of market-based compliance mechanisms to comply with the regulations.

(b) Prior to the inclusion of any market-based compliance mechanism in the regulations, to the extent feasible and in furtherance of achieving the statewide greenhouse gas emissions limit, the state board shall do all of the following:

(1) Consider the potential for direct, indirect, and cumulative emission impacts from these mechanisms, including localized impacts in communities that are already adversely impacted by air pollution.

(2) Design any market-based compliance mechanism to prevent any increase in the emissions of toxic air contaminants or criteria air pollutants.

(3) Maximize additional environmental and economic benefits for California, as appropriate.

(c) The state board shall adopt regulations governing how market-based compliance mechanisms may be used by regulated entities subject to greenhouse gas emission limits and mandatory emission reporting requirements to achieve compliance with their greenhouse gas emissions limits.

38571. The state board shall adopt methodologies for the quantification of voluntary greenhouse gas emission reductions. The state board shall adopt regulations to verify and enforce any voluntary greenhouse gas emission reductions that are authorized by the state board for use to comply with greenhouse gas emission limits established by the state board. The adoption of methodologies is exempt from the rulemaking provisions of the Administrative Procedure Act (Chapter 3.5 (commencing with Section 11340) of Part 1 of Division 3 of Title 2 of the Government Code).

38574. Nothing in this part or Part 4 (commencing with Section 38560) confers any authority on the state board to alter any programs administered by other state agencies for the reduction of greenhouse gas emissions.

PART 6. ENFORCEMENT

38580. (a) The state board shall monitor compliance with and enforce any rule, regulation, order, emission limitation, emissions reduction measure, or market-based compliance mechanism adopted by the state board pursuant to this division.

(b) (1) Any violation of any rule, regulation, order, emission limitation, emissions reduction measure, or other measure adopted by the state board pursuant to this division may be enjoined pursuant to Section 41513, and the violation is subject to those penalties set forth in Article 3 (commencing with Section 42400) of Chapter 4 of Part 4 of, and Chapter 1.5 (commencing with Section 43025) of Part 5 of, Division 26.

(2) Any violation of any rule, regulation, order, emission limitation, emissions reduction measure, or other measure adopted by the state board pursuant to this division shall be deemed to result in an emission of an air contaminant for the purposes of the penalty provisions of Article 3 (commencing with Section 42400) of Chapter 4 of Part 4 of, and Chapter 1.5 (commencing with Section 43025) of Part 5 of, Division 26.

(3) The state board may develop a method to convert a violation of any rule, regulation, order, emission limitation, or other emissions reduction measure adopted by the state board pursuant to this division into the number of days in violation, where appropriate, for the purposes of the penalty provisions of Article 3 (commencing with Section 42400) of Chapter 4 of Part 4 of, and Chapter 1.5 (commencing with Section 43025) of Part 5 of, Division 26.

(c) Section 42407 and subdivision (i) of Section 42410 shall not apply to this part.

PART 7. MISCELLANEOUS PROVISIONS

38590. If the regulations adopted pursuant to Section 43018.5 do not remain in effect, the state board shall implement alternative regulations to control mobile sources of greenhouse gas emissions to achieve equivalent or greater reductions.

38591. (a) The state board, by July 1, 2007, shall convene an environmental justice advisory committee, of at least three members, to advise it in developing the scoping plan pursuant to Section 38561 and any other pertinent matter in implementing this division. The advisory committee shall be comprised of representatives from communities in the state with the most significant exposure to air pollution, including, but not limited to, communities with minority populations or low-income populations, or both.

(b) The state board shall appoint the advisory committee members from nominations received from environmental justice organizations and community groups.

(c) The state board shall provide reasonable per diem for attendance at advisory committee meetings by advisory committee members from nonprofit organizations.

(d) The state board shall appoint an Economic and Technology Advancement Advisory Committee to advise the state board on activities that will facilitate investment in and implementation of technological research and development opportunities, including, but not limited to, identifying new technologies, research, demonstration projects, funding opportunities, developing state, national, and international partnerships and technology transfer opportunities, and identifying and assessing research and advanced technology investment and incentive opportunities that will assist in the reduction of greenhouse gas emissions. The committee may also advise the state board on state, regional, national, and international economic and technological developments related to greenhouse gas emission reductions.

38592. (a) All state agencies shall consider and implement strategies to reduce their greenhouse gas emissions.

(b) Nothing in this division shall relieve any person, entity, or public agency of compliance with other applicable federal, state, or local laws or regulations, including state air and water quality requirements, and other requirements for protecting public health or the environment.

38593. (a) Nothing in this division affects the authority of the Public Utilities Commission.

(b) Nothing in this division affects the obligation of an electrical corporation to provide customers with safe and reliable electric service.

38594. Nothing in this division shall limit or expand the existing authority of any district, as defined in Section 39025.

38595. Nothing in this division shall preclude, prohibit, or restrict the construction of any new facility or the expansion of an existing facility subject to regulation under this division, if all applicable requirements are met and the facility is in compliance with regulations adopted pursuant to this division.

38596. The provisions of this division are severable. If any provision of this division or its application is held invalid, that invalidity shall not affect other provisions or applications that can be given effect without the invalid provision or application.

38597. The state board may adopt by regulation, after a public workshop, a schedule of fees to be paid by the sources of greenhouse gas emissions regulated pursuant to this division, consistent with Section 57001. The revenues collected pursuant to this section, shall be deposited into the Air Pollution Control Fund and are available upon appropriation, by the Legislature, for purposes of carrying out this division.

38598. (a) Nothing in this division shall limit the existing authority of a state entity to adopt and implement greenhouse gas emissions reduction measures.

(b) Nothing in this division shall relieve any state entity of its legal obligations to comply with existing law or regulation.

38599. (a) In the event of extraordinary circumstances, catastrophic events, or threat of significant economic harm, the Governor may adjust the applicable deadlines for individual regulations, or for the state in the aggregate, to the earliest feasible date after that deadline.

(b) The adjustment period may not exceed one year unless the Governor makes an additional adjustment pursuant to subdivision (a).

(c) Nothing in this section affects the powers and duties established in the California Emergency Services Act (Chapter 7 (commencing with Section 8550) of Division 1 of Title 2 of the Government Code).

(d) The Governor shall, within 10 days of invoking subdivision (a), provide written notification to the Legislature of the action undertaken.

SEC. 2 No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because the only costs that may be incurred by a local agency or school district will be incurred because this act creates a new crime or infraction, eliminates a crime or infraction, or changes the penalty for a crime or infraction, within the meaning of Section 17556 of the Government Code, or changes the definition of a crime within the meaning of Section 6 of Article XIII B of the California Constitution.

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# EXHIBIT B

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April 23, 2009

U.S. Environmental Protection Agency
EPA West (Air Docket)
1200 Pennsylvania Ave., NW.
Room B108, Mail Code 6102T,
Washington, DC 20460

**Re: EPA's Request for Comment on California's Request for a Waiver of Federal Preemption for Motor Vehicle Greenhouse Gas Emission Standards**
**74 Fed. Reg. 7040 (February 12, 2009)**
**Docket ID No. EPA–HQ–OAR–2006–0173**

Dear Sir/Madam:

Pacific Gas and Electric Company (PG&E) is pleased to submit this comment letter in support of the State of California's request that EPA approve a waiver of federal preemption for California's motor vehicle greenhouse gas (GHG) emission standards. On June 11, 2007, PG&E submitted a detailed comment letter in support of California's waiver request. In light of EPA's reconsideration of its previous denial of California's request, we would like to reaffirm our support.

PG&E is a California gas and electric utility serving one in twenty Americans and is a leader on climate change and clean air transportation. Our customers have made substantial investments in a clean electric generating portfolio, so that our greenhouse gas emissions are among the lowest of any utility in the nation. PG&E is also implementing some of the most innovative, forward-thinking climate strategies in the industry and supporting California's efforts to do the same.

As described in our previous letter, PG&E was among the first companies to support enactment of California's historic climate change legislation – AB 32 – which is intended to achieve a 25 percent reduction in the state's GHG emissions by 2020. PG&E also supported enactment of California's SB 375. SB 375 is the next step in reducing GHG emissions, by using smart land use planning ("sustainable communities strategies") to reduce local and regional vehicle miles traveled.

Achieving California's legislative goals for reducing GHG emissions depends upon EPA's approval of the preemption waiver. According to the California Air Resources Board (CARB), the transportation sector is responsible for approximately 41 percent of California's GHG emissions. Motor vehicle GHG emissions must be reduced or policymakers will be forced to seek reductions from consumers and businesses in other sectors of California's economy to make up the difference. As a result, those consumers and businesses may be unduly burdened by the need to reduce GHG emissions by more than their fair share. Approval of the waiver not only makes good sense from a public policy perspective, it is essential to ensure fair implementation of AB 32 and SB 375. Accordingly, PG&E supports California's request for a preemption waiver that will allow California to promptly implement its motor vehicle GHG emission standards.

In general, the Clean Air Act prohibits the states from adopting or enforcing emission standards for new motor vehicles. However, in recognition of California's groundbreaking efforts in motor vehicle emissions control and unique need for authority to establish its own motor vehicle emissions control program, Congress included in the Act specific, limited criteria for EPA to use in waiving federal preemption for California motor vehicle emission standards. As described in PG&E's previous comment letter, as well as voluminous documentation and testimony submitted by CARB, EPA does not have grounds – applying the criteria in the Act – to deny California's request for a waiver.

Thank you again for the opportunity to comment on this important issue. PG&E encourages EPA to promptly grant California's request for a preemption waiver, so that the motor vehicle emission standards vital to reducing the state's greenhouse gas emissions can be implemented and begin to make significant reductions in California's GHG emissions.

Sincerely,

JOHN W. BUSTERUD

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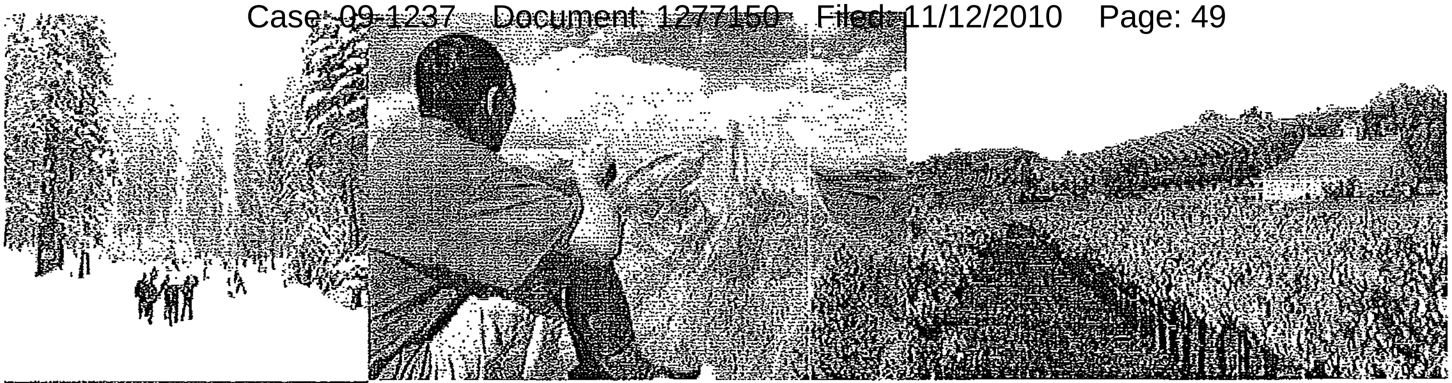
# EXHIBIT C



# CLIMATE CHANGE SCOPING PLAN

*a framework for change*

DECEMBER 2008

*Pursuant to AB 32*
*The California Global Warming Solutions Act of 2006*

*Prepared by*
the California Air Resources Board
for the State of California

Arnold Schwarzenegger
*Governor*

Linda S. Adams
*Secretary, California Environmental Protection Agency*

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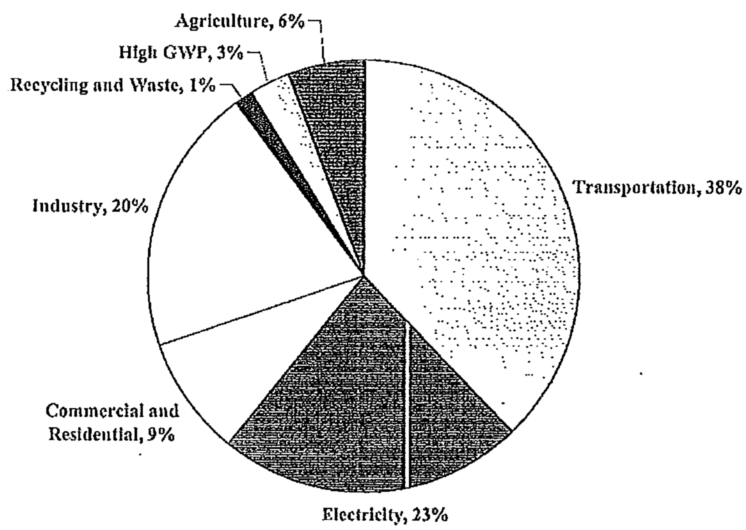
## C. California's Greenhouse Gas Emissions and the 2020 Target

California is the fifteenth largest emitter of greenhouse gases on the planet, representing about two percent of the worldwide emissions. Although carbon dioxide is the largest contributor to climate change, AB 32 also references five other greenhouse gases: methane ($CH_4$), nitrous oxide ($N_2O$), sulfur hexafluoride ($SF_6$), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs). Many other gases contribute to climate change and would also be addressed by measures in this Scoping Plan.

Figure 1 and Table 1 show 2002 to 2004 average emissions and estimates for projected emissions in 2020 without any greenhouse gas reduction measures (business-as-usual case). The 2020 business-as-usual forecast does not take any credit for reductions from measures included in this Plan, including the Pavley greenhouse gas emissions standards for vehicles, full implementation of the Renewables Portfolio Standard beyond current levels of renewable energy, or the solar measures. Additional information about the assumptions in the 2020 forecast is provided in Appendix F.

**Figure 1: California's Greenhouse Gas Emissions (2002-2004 Average)[14]**




As seen in Figure 1, the Transportation sector – largely the cars and trucks that move goods and people – is the largest contributor with 38 percent of the state's total greenhouse gas emissions. Table 1 shows that if we take no action, greenhouse gas emissions in the

[14] Air Resources Board. Greenhouse Gas Inventory. http://www.arb.ca.gov/cc/inventory/inventory.htm (accessed October 12, 2008)

Transportation sector are expected to grow by approximately 25 percent by 2020 (an increase of 46 MMT$CO_2$E).

The Electricity and Commercial/Residential Energy sector is the next largest contributor with over 30 percent of the statewide greenhouse gas emissions. Although electricity imported into California accounts for only about a quarter of our electricity, imports contribute more than half of the greenhouse gas emissions from electricity because much of the imported electricity is generated at coal-fired power plants. AB 32 specifically requires ARB to address emissions from electricity sources both inside and outside of the state.

California's Industrial sector includes refineries, cement plants, oil and gas production, food processors, and other large industrial sources. This sector contributes almost 20 percent of California's greenhouse gas emissions, but the sector's emissions are not projected to grow significantly in the future. The sector termed recycling and waste management is a unique system, encompassing not just emissions from waste facilities but also the emissions associated with the production, distribution and disposal of products throughout the economy.

Although high global warming potential (GWP) gases are a small contributor to historic greenhouse gas emissions, levels of these gases are projected to increase sharply over the next several decades, making them a significant source by 2020.

The Forest sector is unique in that forests both emit greenhouse gases and uptake carbon dioxide ($CO_2$). While the current inventory shows forests as a sink of 4.7 MMT$CO_2$E, carbon sequestration has declined since 1990. For this reason, the 2020 projection assumes no net emissions from forests.

The agricultural greenhouse gas emissions shown are largely methane emissions from livestock, both from the animals and their waste. Emissions of greenhouse gases from fertilizer application are also important contributors from the Agricultural sector. ARB has begun a research program to better understand the variables affecting these emissions. Opportunities to sequester $CO_2$ in the Agricultural sector may also exist; however, additional research is needed to identify and quantify potential sequestration benefits.

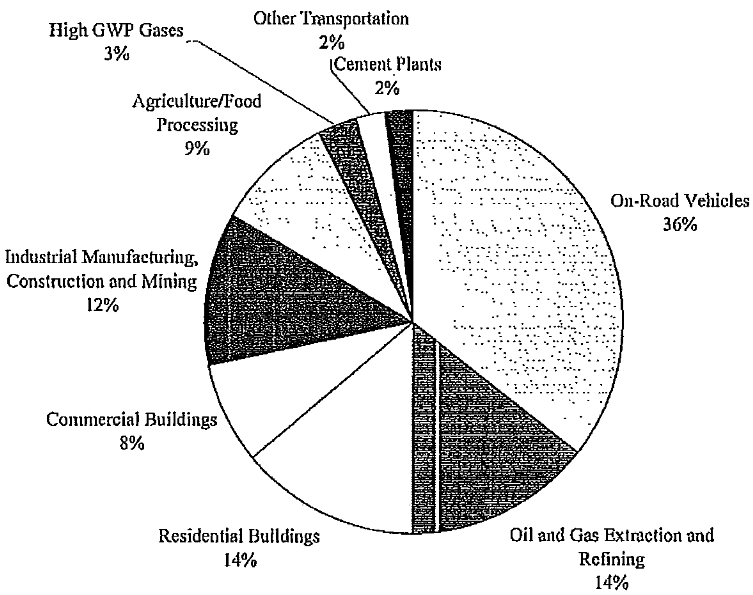
In December 2007, ARB approved a greenhouse gas emissions target for 2020 equivalent to the state's calculated greenhouse gas emissions level in 1990. ARB developed the 2020 target after extensive technical work and a series of stakeholder meetings. The 2020 target of 427 MMT$CO_2$E requires the reduction of 169 MMT$CO_2$E, or approximately 30 percent, from the state's projected 2020 emissions of 596 MMT$CO_2$E (business-as-usual) and the reduction of 42 MMT$CO_2$E, or almost 10 percent, from 2002-2004 average emissions.

Table 1: 2002-2004 Average Emissions and 2020 Projected Emissions (Business-as-Usual)[15]
(MMTCO2E)

| Sector | 2002-2004 Average Emissions | Projected 2020 Emissions [BAU] |
|---|---|---|
| Transportation | 179.3 | 225.4 |
| Electricity | 109.0 | 139.2 |
| Commercial and Residential | 41.0 | 46.7 |
| Industry | 95.9 | 100.5 |
| Recycling and Waste | 5.6 | 7.7 |
| High GWP | 14.8 | 46.9 |
| Agriculture | 27.7 | 29.8 |
| Forest Net Emissions | -4.7 | 0.0 |
| **Emissions Total** | **469** | **596** |

Figure 2 presents California's historic greenhouse gas emissions in a different way – based not on the source of the emissions, but on the end use. This chart highlights the importance of addressing on-road transportation sources of greenhouse gas emissions, as well as the significant contribution from the heating, cooling, and lighting of buildings.

Figure 2: California's Greenhouse Gas Emissions – A Demand-Side View –




[15] Ibid.

The data shown in this section provide two ways to look at California's greenhouse gas profile – emissions-based and end use (demand side)-based. While it is possible to illustrate the inventory many different ways, no chart or graph can fully display how diverse economic sectors fit together. California's economy is a web of activity where seemingly independent sectors and subsectors operate interdependently and often synergistically. For example, reductions in water use reduce the need to pump water, directly lowering electricity use and associated greenhouse gas emissions. Similarly, reducing the generation of waste reduces the need to transport the waste to landfills – lowering transportation emissions and, possibly, landfill methane emissions. Increased recycling or re-use reduces the carbon emissions embedded in products – it takes less energy to make a soda can made from recycled aluminum than from virgin feedstock.

The measures included in this Scoping Plan are identified discretely, but many impact each other, and changes in one measure can directly overlap and have a ripple effect on the efficacy and success of other measures. The measures and policies outlined in this Plan reflect these interconnections, and highlight the need for all agencies to work collaboratively to implement the Scoping Plan.

**Key elements of California's recommendations for reducing its greenhouse gas emissions to 1990 levels by 2020 include:**

- **Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;**
- **Achieving a statewide renewables energy mix of 33 percent;**
- **Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;**
- **Establishing targets for transportation-related greenhouse gas emissions for regions throughout California and pursuing policies and incentives to achieve those targets;**
- **Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and**
- **Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation.**

The recommended greenhouse gas emissions reduction measures are listed in Table 2 and are summarized in Section C below. The total reduction for the recommended measures slightly exceeds the 169 $MMTCO_2E$ of reductions estimated in the Draft Scoping Plan. This is the net effect of adding several measures and adjusting the emission reduction estimates for some other measures. The 2020 emissions cap in the cap-and-trade program is preserved at the same level as in the Draft Scoping Plan (365 $MMTCO_2E$).

The measures listed in Table 2 lead to emissions reductions from sources within the capped sectors (146.7 $MMTOCO_2E$) and from sources or sectors not covered by cap-and-trade (27.3 $MMTCO_2E$). As mentioned, within the capped sectors the reductions derive both from direct regulation and from the incentives posed by allowance prices. Further discussion of how the cap-and-trade program and the complementary measures work together to achieve the overall target is provided below.

Table 2 also lists several other recommended measures which will contribute toward achieving the 2020 statewide goal, but whose reductions are not (for various reasons including the potential for double counting) additive with the other measures. Those measures and the basis for not including their reductions are further discussed in Section C.

## Table 2: Recommended Greenhouse Gas Reduction Measures

| Recommended Reduction Measures | Reductions Counted Towards 2020 Target ($MMTCO_2E$) | |
|---|---|---|
| **ESTIMATED REDUCTIONS RESULTING FROM THE COMBINATION OF CAP-AND-TRADE PROGRAM AND COMPLEMENTARY MEASURES** | | 146.7 |
| California Light-Duty Vehicle Greenhouse Gas Standards<br>• Implement Pavley standards<br>• Develop Pavley II light-duty vehicle standards | 31.7 | |
| Energy Efficiency<br>• Building/appliance efficiency, new programs, etc.<br>• Increase CHP generation by 30,000 GWh<br>• Solar Water Heating (AB 1470 goal) | 26.3 | |
| Renewables Portfolio Standard (33% by 2020) | 21.3 | |
| Low Carbon Fuel Standard | 15 | |
| Regional Transportation-Related GHG Targets[16] | 5 | |
| Vehicle Efficiency Measures | 4.5 | |
| Goods Movement<br>• Ship Electrification at Ports<br>• System-Wide Efficiency Improvements | 3.7 | |
| Million Solar Roofs | 2.1 | |
| Medium/Heavy Duty Vehicles<br>• Heavy-Duty Vehicle Greenhouse Gas Emission Reduction (Aerodynamic Efficiency)<br>• Medium- and Heavy-Duty Vehicle Hybridization | 1.4 | |
| High Speed Rail | 1.0 | |
| Industrial Measures (for sources covered under cap-and-trade program)<br>• Refinery Measures<br>• Energy Efficiency & Co-Benefits Audits | 0.3 | |
| Additional Reductions Necessary to Achieve the Cap | 34.4 | |
| **ESTIMATED REDUCTIONS FROM UNCAPPED SOURCES/SECTORS** | | 27.3 |
| High Global Warming Potential Gas Measures | 20.2 | |
| Sustainable Forests | 5.0 | |
| Industrial Measures (for sources not covered under cap and trade program)<br>• Oil and Gas Extraction and Transmission | 1.1 | |
| Recycling and Waste (landfill methane capture) | 1.0 | |
| **TOTAL REDUCTIONS COUNTED TOWARDS 2020 TARGET** | | 174 |
| **Other Recommended Measures** | **Estimated 2020 Reductions ($MMTCO_2E$)** | |
| State Government Operations | 1-2 | |
| Local Government Operations | TBD | |
| Green Buildings | 26 | |
| Recycling and Waste<br>• Mandatory Commercial Recycling<br>• Other measures | 9 | |
| Water Sector Measures | 4.8 | |
| Methane Capture at Large Dairies | 1.0 | |

[16] This number represents an estimate of what may be achieved from local land use changes. It is not the SB 375 regional target. ARB will establish regional targets for each Metropolitan Planning Organization (MPO) region following the input of the Regional Targets Advisory Committee and a public consultation process with MPOs and other stakeholders per SB 375.

The development of a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system is a central feature of the overall recommendation. This program will lead to prices on greenhouse gas emissions, prices that will spur reductions in greenhouse gas emissions throughout the California economy, through application of existing technologies and through the creation of new technological and organizational options. The rationale for combining a cap-and-trade program with complementary measures was outlined by the Market Advisory Committee, which noted the following in its recommendations to the ARB:

> Before setting out the key design elements of a cap-and-trade program it is important to explain how the proposed emissions trading approach relates to other policy measures. The following considerations seem especially relevant:
>
> - The emissions trading program puts a cap on the total emissions generated by facilities covered under the system. Because a certain number of emissions allowances are put in circulation in each compliance period, this approach provides a measure of certainty about the total quantity of emissions that will be released from entities covered under the program.
> - The market price of emissions allowances yields an enduring price signal for GHG emissions across the economy. This price signal provides incentives for the market to find new ways to reduce emissions.
> - By itself, a cap-and-trade program alone will not deliver the most efficient mitigation outcome for the state. There is a strong economic and public policy basis for other policies that can accompany an emissions trading system. [17]

The Economic and Technology Advancement Advisory Committee (ETAAC) also addressed the benefits associated with a combined policy of cap and trade and complementary measures.

> A declining cap can send the right price signals to shape the behavior of consumers when purchasing products and services. It would also shape business decisions on what products to manufacture and how to manufacture them. Establishing a price for carbon and other GHG emissions can efficiently tilt decision-making toward cleaner alternatives. This cap and trade approach (complemented by technology-forcing performance standards) avoids the danger of having government or other centralized decision-makers choose specific technologies, thereby limiting the flexibility to allow other options to emerge on a level playing field.

[17] Recommendations of the Market Advisory Committee to the California Air Resources Board. *Recommendations for Designing a Greenhouse Gas Cap-and-Trade System for California.* June 30, 2007. p. 19. http://www.climatechange.ca.gov/publications/market_advisory_committee/2007-06-29_MAC_FINAL_REPORT.PDF (accessed October 12, 2008)

> If markets were perfect, such a cap and trade system would bring enough new technologies into the market and stimulate the necessary industrial RD&D to solve the climate change challenge in a cost effective manner. As the Market Advisory Committee notes, however, placing a price on GHG emissions addresses only one of many market failures that impede solutions to climate change. Additional market barriers and co-benefits would not be addressed if a cap and trade system were the only state policy employed to implement AB 32. Complementary policies will be needed to spur innovation, overcome traditional market barriers (e.g., lack of information available to energy consumers, different incentives for landlords and tenants to conserve energy, different costs of investment financing between individuals, corporations and the state government, etc.) and address distributional impacts from possible higher prices for goods and services in a carbon-constrained world.[18]

The Environmental Justice Advisory Committee (EJAC) also supports an approach that includes a price on carbon along with complementary measures. Although the EJAC recommends that the carbon price be established through a carbon fee rather than through a cap-and-trade program, they recognize the importance of mutually supportive policies:

> California should establish a three-pronged approach for addressing greenhouse gases: (1) adopting standards and regulations; (2) providing incentives; and (3) putting a price on carbon via a carbon fee. The three pieces support one another and no single prong can work without equally robust support from the others.[19]

In keeping with the rationale outlined above, ARB finds that it is critically important to include complementary measures directed at emission sources that are included in the cap-and-trade program. These measures are designed to achieve cost-effective emissions reductions while accelerating the necessary transition to the low-carbon economy required to meet the 2050 target:

- The already adopted Light-Duty Vehicle Greenhouse Gas Standards are designed to accelerate the introduction of low-greenhouse gas emitting vehicles, reduce emissions and save consumers money at the pump.
- The Low Carbon Fuel Standard (LCFS) is a flexible performance standard designed to accelerate the availability and diversity of low-carbon fuels by taking into consideration the full life-cycle of greenhouse gas emissions. The LCFS will reduce emissions and make our economy more resilient to future petroleum price volatility.
- The Regional Transportation-Related Greenhouse Gas Targets provide incentives for channeling investment into integrated development patterns and transportation

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[18] Recommendations of the Economic and Technical Advancement Advisory Committee (ETAAC), Final Report. *Technologies and Policies to Consider for Reducing Greenhouse Gas Emissions in California.* February 14, 2008. pp. 1-4 http://www.arb.ca.gov/cc/etaac/ETAACFinalReport2-11-08.pdf (accessed October 12, 2008)

[19] Recommendations and Comments of the Environmental Justice Advisory Committee on the Implementation of the Global Warming Solutions Act of 2006 (AB32) on the Draft Scoping Plan. October 2008. p. 10. http://www.arb.ca.gov/cc/ejac/ejac_comments_final.pdf (accessed October 12, 2008)

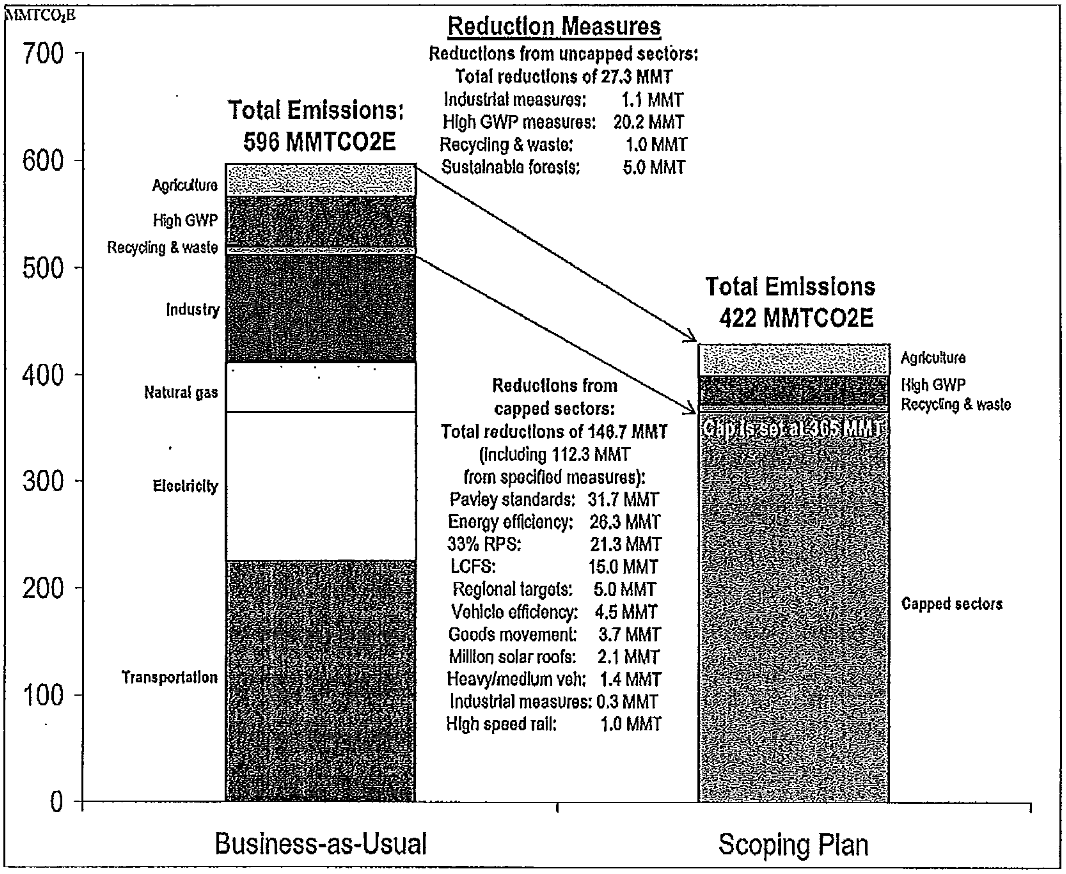
infrastructure, through improved planning. Improved planning and the resulting development are essential for meeting the 2050 emissions target.

- In the Energy sector, measures will provide better information and overcome institutional barriers that slow the adoption of cost-effective energy efficiency technologies. Enhanced energy efficiency programs will provide incentives for customers to purchase and install more efficient products and processes, and building and appliance standards will ensure that manufacturers and builders bring improved products to market.
- The Renewables Portfolio Standard (RPS) promotes multiple objectives, including diversifying the electricity supply. Increasing the RPS to 33 percent is designed to accelerate the transformation of the Electricity sector, including investment in the transmission infrastructure and system changes to allow integration of large quantities of intermittent wind and solar generation.
- The Million Solar Roofs Initiative uses incentives to transform the rooftop solar market by driving down costs over time.
- The Goods Movement program is primarily intended to achieve criteria and toxic air pollutant reductions but will provide important greenhouse gas benefits as well.
- Similar to the light duty vehicle greenhouse gas standards, the heavy duty and medium duty vehicle measures and the additional light duty vehicle efficiency measures aim to achieve cost-effective reductions of GHG emissions and save fuel.

Each of these complementary measures helps to position the California economy for the future by reducing the greenhouse gas intensity of products, processes, and activities. When combined with the absolute and declining emissions limit of the cap-and-trade program, these policies ensure that we cost-effectively achieve our greenhouse gas emissions goals and set ourselves on a path towards a clean low carbon future.

Figure 3 illustrates how the recommended emission reduction measures together put California on a path toward achieving the 2020 goal. The left hand column in Figure 3 shows total projected business as usual emissions in 2020, by sector (596 $MMTCO_2E$). The right hand column shows 2020 emissions after applying the Scoping Plan recommended reduction measures (422 $MMTCO_2E$). The measures that accomplish the needed reductions are listed in between the columns. As Figure 3 shows, there are a total of 27.3 $MMTCO_2E$ in reductions from uncapped sectors, and 146.7 $MMTCO_2E$ in reductions from capped sectors.

## Figure 3: California Greenhouse Gas Emissions in 2020 and Recommended Reduction Measures




The recommended cap-and-trade program provides covered sources with the flexibility to pursue low cost reductions. It is important to recognize, however, that other recommended measures also provide compliance flexibility. As is often the case with ARB regulations, many of the measures establish performance standards and allow regulated entities to determine how best to achieve the required emission level. This approach rewards innovation and allows facilities to take advantage of the best way to meet the overarching environmental objective.

Table 3 lists the proposed measures that include compliance flexibility or market mechanisms. This flexibility ranges from the potential for tradable renewable energy credits in the Renewables Portfolio Standard to the incentives to encourage emission reductions in electricity and natural gas efficiency programs to the averaging, banking and trading mechanisms in the Pavley and Low Carbon Fuel Standard programs to a multi-sector cap-and-trade program.

### Table 3: Measures With Flexible Market Compliance Features

| Measure | Estimated Reductions |
|---|---|
| Additional Reductions from Capped Sectors | 34.4 |
| California Light-Duty Vehicle Greenhouse Gas Standards (Pavley I & II) | 31.7 |
| Renewables Portfolio Standard | 21.3 |
| Electricity Efficiency | 15.2 |
| Low Carbon Fuel Standard | 15.0 |
| Mitigation Fee on High GWP Gases | 5.0 |
| Natural Gas Efficiency | 4.3 |
| Goods Movement Systemwide Efficiency | 3.5 |
| Medium/Heavy Duty Vehicle Hybridization | 0.5 |
| **Total** | **130.9** |

The recommended mix of measures builds on a strong foundation of previous action in California to address climate change and broader environmental issues. The program recommended here relies on implementing existing laws and regulations that were adopted to reduce greenhouse gas emissions and other policy goals; strengthening and expanding existing programs; implementing the discrete early actions adopted by the Board in 2007; and new measures developed during the Scoping Plan process itself.

The mix of measures recommended in this Plan provides a comprehensive approach to reduce emissions to achieve the 2020 target, and to initiate the transformations required to achieve the 2050 target. The cap-and-trade program and complementary measures will cover about 85 percent of greenhouse gas emissions throughout California's economy. ARB recognizes that due to several factors, including information discovered during regulatory development, technology maturity, and implementation challenges, actual reductions from individual measures aimed at achieving the 2020 target may be higher or lower than current estimates. The inclusion of many of these emissions within the cap-and-trade program, along with a margin of safety in the uncapped sectors, will help ensure that the 2020 target is met. The combination of approaches provides certainty that the overall program will meet the target despite some degree of uncertainty in the estimates for any individual measure. Additionally, by internalizing the cost of $CO_2E$ emissions throughout the economy, the cap-and-trade program supports the complementary measures and provides further incentives for innovation and continuing emissions reductions from energy producers and consumers setting us on a path toward our 2050 goals.

Some emissions sources are not currently suitable for inclusion in the cap-and-trade program due to challenges associated with precise measurement, tracking or sector structure. For these emissions sources, ARB is including measures designed to focus on waste management, agriculture, forestry, and certain emissions of high GWP gases, a rapidly growing component of California's greenhouse gas emissions inventory.

California's economy is expected to continue to experience robust growth through 2020. Economic modeling, including evaluation of the effects on low-income Californians, shows that the measures included within this Scoping Plan can be implemented with a net positive effect on California's long-term economic growth. The evaluation of related public health and environmental benefits of the various measures also shows that implementation will result in not only reduced greenhouse gas emissions and improved public health, but also in a beneficial effect on California's environment. The results of these evaluations are presented in Chapter III.

AB 32 includes specific criteria that ARB must consider before adopting regulations for market-based compliance mechanisms to implement a greenhouse gas reduction program, and directs the Board, to the extent feasible, to design market-based compliance mechanisms to prevent any increase in the emissions of toxic air contaminants or criteria air pollutants. In the development of regulations that contain market mechanisms, ARB will consider the economic, environmental and public health effects, and the evaluation of potential localized impacts. These results will be used to institute appropriate economic, environmental and public health safeguards.

ARB has also designed the recommendation to ensure that reductions will come from throughout the California economy. Transportation accounts for the largest share of California's greenhouse gas emissions. Accordingly, a large share of the reduction of greenhouse gas emissions from the recommended measures comes from this sector. Measures include the inclusion of transportation fuels in the cap-and-trade program, the Low Carbon Fuel Standard to reduce the carbon intensity of transportation fuels, enforcement of regulations that reduce greenhouse gas emissions from vehicles, and policies to reduce transportation emissions by changes in future land use patterns and community design as well as improvements in public transportation.

In the Energy sector, the recommended measures increase the amount of electricity from renewable energy sources, and improve the energy efficiency of industries, homes and buildings. The inclusion of these sectors and the Industrial sector in the cap-and-trade program provides further assurance that significant cost-effective reductions will be achieved from the sectors that contribute the greatest emissions. Additional energy production from renewable resources may also rely on measures suggested in the Agriculture, Water, and the Recycling and Waste Management Sectors.

Other sectors are also called upon to cut emissions. The cap-and-trade program covers industrial sources and natural gas use. The recommended measures would require industrial processes to examine how to lower their greenhouse gas emissions and be more energy efficient, and would require goods movement operations through California's ports to be more energy efficient. Other measures address waste management, agricultural and forestry practices, as well as the transport and treatment of water throughout the state. Finally, the recommended measures address ways to reduce or eliminate the emissions of high global warming potential gases that, on a per-ton basis, contribute to global warming at a level many times greater than carbon dioxide.

As the Scoping Plan is implemented, ARB and other agencies will coordinate with the Green Chemistry Initiative, particularly in the Green Building and Recycling/Waste sectors. Green Chemistry is a fundamentally new approach to environmental protection that emphasizes environmental protection at the design stage of product and manufacturing processes, rather than focusing on end-of-pipe or end-of-life activities, or a single environmental medium, such as air, water or soil. This new approach will reduce the use of harmful chemicals, generate less waste, use less energy, and, accordingly, will contribute toward California's greenhouse gas reduction goals.

## A. The Role of State Government: Setting an Example

For many years California State government has successfully incorporated environmental principles in managing its resources and running its business. The Governor has directed State agencies to sharply reduce their building-related energy use and encouraged our State-run pensions to invest in energy efficient and clean technologies.[20] The State also has been active in procuring low-emission, alternative fuel vehicles in its large fleet.

While State government has already accomplished much to reduce its greenhouse gas emissions, it can and must do more. State agencies must lead by example by continuing to reduce their greenhouse gas emissions. Therefore, California State government has established a target of reducing its greenhouse gas emissions by a *minimum* of 30 percent below its estimated business-as-usual emissions by 2020 – approximately a 15 percent reduction from current levels.

As an owner-operator of key infrastructure, State government has the ability to ensure that the most advanced, cost-effective environmental performance requirements are used in the design, construction, and operation of State facilities. As a purchaser with significant market power, State government has the ability to demand that the products and services it procures contribute positively toward California's targets to reduce greenhouse gas emissions, such as through the efforts of Environmentally Preferable Purchasing. As an investor of more than $400 billion,[21] State government has the ability to prioritize low-carbon investments. With more than 350,000 employees, State government is uniquely situated to adopt and implement policies that give State workers the ability to decrease their individual carbon impact, including encouraging siting facilities within communities to enhance balance in jobs and housing, encouraging carpooling, biking, walking, telecommuting, the use of public transit, and the use of alternative work schedules.

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[20]Governor Schwarzenegger signed Executive Order Executive Order S-20-04 on December 14, 2004. This Order contains a number of directives, including a set of aggressive goals for reducing state building energy use and requested the California Public Employees Retirement System (CalPERS) and the California State Teachers Retirement System (CalSTRS) to target resource-efficient buildings for real estate investments and commit funds toward clean, efficient and sustainable technologies.

[21] CalPERS and CalSTRS are the two largest pension systems in the nation with investments in excess of $400 billion as of August 2008.

**CERTIFICATE OF COMPLIANCE WITH WORD LIMITATION**

Pursuant to Federal Rule of Appellate Procedure 32(a)(7)(C) and D.C. Circuit Rule 3201, I hereby certify that the foregoing Joint Brief For *Amici Curiae* PG&E Corporation And Sempra Energy In Support Of Respondents is proportionately spaced, has a typeface of 14 points and contains 2,348 words, excluding the cover page, Table of Contents, Table of Authorities, and the Glossary, as counted by the Word processing system.

November 12, 2010

Respectfully submitted,

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## CERTIFICATE OF SERVICE

I hereby certify that the electronic original of the foregoing "Final Joint Brief for Amici Curiae PG&E Corporation and Sempra Energy in Support of Respondents" (including Exhibits A thru C) was filed with the Clerk of the Court for the United States Court of Appeals for the D.C. Circuit on this 12th day of November, 2010, through the CM/ECF electronic filing system. Parties to the case who are registered CM/ECF users were served by receipt of electronic notification through the Court's CM/ECF system.

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